82-1698

No.

In the Supreme Court

OF THE

United States

OCTOBER TERM, 1982

MABEL NEVIN, et al.,
Petitioners,

vs.

UNITED STATES OF AMERICA,
Respondent.

PETITION FOR WRIT OF CERTIORARI TO NINTH CIRCUIT COURT OF APPEALS

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QUESTIONS PRESENTED

1. Whether the United States government is immune from tort liability under the discretionary function exception to the Federal Tort Claims Act, for the negligence of its medical personnel who, when ordered to select a bacteria that would be innocuous when sprayed over San Francisco, made their choice after considering only medical and scientific factors, and erroneously selected a bacteria that was not innocuous for its intended use.

2. Whether a proffered witness possessing a Ph.D. in bacteriology and epidemiology lacks the knowledge, skill, experience, training or education that would qualify him to testify as an expert under Federal Rule of Evidence 702 for purposes of expressing an opinion about negligence and causation in a wrongful death case where it is alleged that the decedent was negligently exposed to bacteria that resulted in his death.

3. Whether it was negligent for United States Government medical personnel who, after being ordered to select a bacteria that would be innocuous when sprayed over San Francisco as part of a military bacteriological warfare exercise, to have selected a bacteria that they knew could cause injury to the more debilitated members of the population.

4. Whether the bacteriological spraying of San Francisco by the Respondent in 1950 caused the decedent's death.

PARTIES INVOLVED

Petitioners: Mabel Nevin; Mary Schwartz; Anna Bray; Catherine Carey; Bernice Hauck; Edward J. Nevin, II; John Nevin; Alice Marie Thompson; Rosemary McFadden; Philip Bray; Kevin Bray; Joan Gallagher; Ann Marie Uyehara; Thomas Hauck; Virginia Radanovich; Edward Nevin; Michael Nevin; Catherine Braun; Margaret Mary Johnston; James Nevin; Eileen Donohoe; Denis Nevin; John Nevin; Coleen Nevin; Bernard Bray; Peter Bray; Edward J. Nevin as Guardian ad Litem for Matthew Nevin; Patrick Nevin; Edward Thompson; Peter Thompson; Theresa Thompson; Edward McFadden; Sean McFadden; Collette McFadden; Erin Bray; Eileen Bray; Mary Bray; Florence Bray; John Gallagher; Mark Gallagher; Michael Gallagher; James Gallagher; Lance Uyehara; Sean Uyehara; Allison Uyehara; Aaron Hauck; Jeanne Radanovich; Robert Radanovich; Michael Radanovich; David Radanovich; Mary Radanovich; Desmond Radanovich; Jennifer Nevin; Jessica Nevin; Michael Nevin; Michelle Nevin; Timothy Nevin; Kimberly Braun; Molly Braun; Patrick Johnston; Christopher Johnston; James Nevin; Nicole Nevin.

Respondent: United States of America.

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OPINIONS BELOW

The opinion of the Ninth Circuit Court of Appeals is reported as *Nevin v. United States*, 696 F.2d 1229 (9th Cir. 1983), and is printed in Appendix A hereto, infra, page A-1. The findings of fact and conclusions of law in the United States District Court for the Northern District of California is unreported and is printed in Appendix A hereto, infra, page A-9.

JURISDICTION

The judgment of the United States District Court for the Northern District of California was entered on May 20, 1981. The opinion of the Ninth Circuit Court of Appeals was filed January 17, 1983. The jurisdiction of this court is invoked pursuant to 28 U.S.C. § 1254(1).

STATUTES INVOLVED

1. The discretionary function exception to the Federal Tort Claims Act, 28 U.S.C. § 2680(a):

> [a]ny claim . . . based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.

2. Federal Rule of Evidence 702:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

STATEMENT OF CASE

This is a wrongful death action brought on July 31, 1978, by Mabel Nevin and other relatives of the decedent, pur-

suant to the Federal Tort Claims Act (FTCA), 28 U.S.C. § 1346(b).

In September, 1950, the United States Army secretly sprayed the San Francisco bay area, including its unwitting population, with a bacteria called serratia marcescens. This was done from a U.S. Navy vessel off the coast of San Francisco in order to determine whether bacteria could travel in the air after an enemy germ warfare attack and reach the bay area population. The spraying was kept secret by the government (hereinafter referred to as respondent) until 1976 when the news media reported the story.

The factual background leading up to this spraying is undisputed. In October of 1948 the Secretary of Defense's Committee on Biological Warfare, chaired by Ira Baldwin, submitted its "Report on Special Biological Warfare Operations." CR 133 at 10; Defendant's Exhibit 6.

According to the Respondent "The Committee provided a blueprint on goals, objectives, organization, and examples of projects." Defendant's Exhibit 29, at 3. One of the projects recommended was designed to "[t]est ventilating systems, subway systems, and water supply systems with *innocuous organisms* to determine quantitatively the extent to which such subversive dissemination of pathogenic biological agents is possible." Defendant's Exhibit 6, at 7 (emphasis added). The trial court concluded that "[T]he directive of the operation was to use 'innocuous organisms'." CR 133 at 16.

The Baldwin Committee's recommendations were approved by the Secretary of the Defense and it became the genesis for vulnerability tests beginning in 1949, with the first large area vulnerability test being conducted in San

Francisco in September of 1950. Defendant's Exhibit 36, at 2; CR 133 at 11. The trial court found that the Baldwin Committee acted exclusively in an advisory capacity and had no command authority. CR 133 at 10. However, it is undisputed that the approval of the Committee's recommendations by the Secretary of Defense constituted a command to conduct such testing with *innocuous organisms*. This was established by witnesses for the Respondent.

Dr. Charles Phillips, one of the government personnel who helped conduct the spraying, testified at trial that he felt bound by the directive to use an *innocuous organism* as recommended by the Baldwin Committee and approved by the Secretary of Defense. He testified that it would have been a violation of that directive to use an organism that was not innocuous. RT 513-14.

General William Creasy another participant in the spraying, testified that the Secretary of Defense showed some degree of deference toward the Baldwin Committee. RT 605-06. It was an informed body according to General Creasy, and the Secretary of Defense relied on it. RT 605-06. General Creasy stated unequivocally that he was bound by the Secretary of Defense's directive to use innocuous organisms. RT 667.

The trial court found that the command authority relating to biological warfare ran from the Office of the Secretary of Defense down to the Chief Chemical Officer, General Anthony McAuliffe. Next in line was the Chief of the Research and Engineering Division, then Colonel William Creasy. CR 133 at 9. Although the overall responsibility for biological warfare experiments rested with the Chief Chemical Officer, General McAuliffe (CR 133 at 11), it is

undisputed that he was bound by the directive of the Secretary of Defense to use innocuous organisms.

The San Francisco experiment was originally proposed by civilian scientists at Camp Detrick, the Army's chemical and biological warfare laboratory. CR 133 at 13-14. The proposal was first presented to Dr. Charles Phillips. From him it went to Camp Detrick's Technical Director, Dr. Oram Woolpert, who forwarded the proposal to Colonel Creasy. From Colonel Creasy it went to the Chief Chemical Officer, General McAuliffe. CR 133 at 14.

It is undisputed that the person who had the job of deciding which organism would be "innocuous" for dissemination over San Francisco was the Safety Director of Camp Detrick, *a physician*. According to Dr. Phillips, it was during the initial formulation stage of the San Francisco experiment that serratia marcescens was proposed to be used. RT 381-82. At trial, counsel for the Respondent asked Dr. Phillips: "Who at Detrick was responsible for saying: 'This is a safe organism to use in a test like this?' " Dr. Phillips replied: "That would be the Safety Director." RT 399.

Another participant from the 1950 test also testified about the Safety Director's role. The Technical Director, Dr. Oram Woolpert testified that he himself did not personally review the medical literature about the safety of serratia marcescens prior to the 1950 test because this was the job of the Safety Director and his staff of medical personnel. RT 731, 741-42, 882-83.

There is no evidence in the record that anybody other than the Safety Director and his staff of medical personnel reviewed the medical literature and determined that

serratia marcescens would be "innocuous" when sprayed over San Francisco. Moreover, there is no evidence in the record that in making this determination, the Safety Director, *a physician,* considered any factors other than the nature of the organism and the medical consequences of its application over a population certain to contain debilitated persons.

Additionally, it is undisputed that General McAuliffe was not a scientist or a physician. RT 627, 636, 746, 890. The record is devoid of any evidence that General McAuliffe reviewed the medical literature. Moreover, even if General McAuliffe had made the primary determination that the organism was innocuous, there is no evidence that anything other than *scientific and medical* factors needed to be considered. Once again, those factors are the nature of the organism and the medical consequences of its application over a population certain to contain debilitated persons.

Shortly after the spraying, serratia marcescens was diagnosed in 11 patients at Stanford University Hospital, which was then located in San Francisco. One of these patients was Edward Nevin I. At the time of the military's spraying, Edward Nevin was in a debilitated condition with very low resistance because of several factors: (1) he had very recently undergone prostate surgery, (2) he had an open wound as a result of the surgery, (3) he was 75 years old, and (4) much of his body's natural defensive bacteria had been depleted by administration of antibiotics. As a result of the serratia marcescens bacteria that infested his body, Edward Nevin died.

There is no dispute that serratia marcescens is an "opportunist" organism. Even the trial court found this

to be true. CR 133 at 22. Being an opportunist organism means that it generally will not pose any danger to healthy individuals. However, for persons whose resistance is lowered from such factors as age, sickness, surgery, or antibiotic treatment, an opportunist organism like serratia marcescens can cause illness. This is undisputed. CR 133 at 33; RT 94-95, 906-08.

The Respondent has never contended that it was unforeseeable in 1950 that among the more than 800,000 persons living in San Francisco, there would be some, like decedent, who had abnormally low resistance to micro-organisms.

Dr. Oram Woolpert, the Technical Director of Camp Detrick at the time of the spraying, testified at trial that it was known, both to his staff, and to the Safety Director, before 1950, that serratia marcescens was an opportunist organism. RT 868. *See generally,* RT 716-21, 761-63, 820-21, 843. There is no evidence in the record contradicting Dr. Woolpert's admission on this point.

The discovery of serratia marcescens in the eleven patients at Stanford University Hospital was thought to be so unusual at the time by the treating physicians, that a medical journal article describing the experience was soon written by those treating physicians and published in 1951. Defendant's Exhibit 52; RT 75-78. However, at the time the article was written, the authors, along with the public, were unaware of the military's spraying. The Nevin family was unaware of the medical journal article until 1976.

In 1952, as a result of this medical journal article, the Respondent conducted a secret investigation of the decedent's death in order to determine whether it was caused by the military's spraying. Defendant's Exhibit 25. However, there is no evidence that the investigating committee

looked at anything other than the 1951 medical journal article. The decedent's medical records were not examined by the committee. None of the patient's bacteriology, urology or hematology specimens were examined; none of the tissue samples, gross or microscop, from the decedent's post-mortem examination were obtained for review; none of the treating physicians were ever contacted. The Respondent made no attempt to preserve any of the decedent's medical records or laboratory specimens, both of which would have constituted vital evidence on the issue of causation in this case. The Nevin family was never told about the investigation so they had no opportunity to preserve these materials.

However, the investigating committee concluded that one of decedent's treating physicians, Dr. Lowell Rantz, should be given security clearance so that a more thorough investigation could be accomplished. Defendant's Exhibit 25. Dr. Rantz never received this security clearance.

At trial, Petitioners sought to learn why Dr. Rantz never received his recommended security clearance. General William Creasy, who was one of those in charge of the military's bacterialogical warfare program in 1950, was asked at trial why Dr. Rantz never received this clearance. General Creasy testified that Dr. Rantz had died before the clearance could be given. RT 660. Yet, Petitioners later produced a death certificate and probate documents establishing the date of Dr. Rantz' death as June 6, 1964, which is more than a decade after his security clearance was recommended. Plaintiff's Exhibit 18, RT 891.

Based on its incomplete study in 1952, the Respondent's investigating committee concluded that the causation issue could not be resolved. Defendant's Exhibit 25.

All of the decedent's medical records were routinely destroyed by Stanford University Hospital in 1965. None of the laboratory specimens existed at the time of trial. The only written evidence describing the medical condition of the decedent that remains is the 1951 medical journal article. Only one of the authors of that article was alive when the trial took place in March 1981. His name is Dr. Richard Wheat and he testified on behalf of the Petitioners. RT 74-192.

At trial, the Respondent sought to prove that there was no causal relationship between the spraying and the decedent's death. The principle evidence presented by the Respondent on this point consisted of the testimony of Dr. James Farmer.

Dr. Farmer's testimony became the primary basis for the Respondent's position on several issues. In reaching its conclusions about causation, the trial court relied most heavily upon the testimony of Dr. Farmer. CR 133 at 25, 30-33. Moreover, the trial court relied on Dr. Farmer's testimony for its findings that the bacteria sprayed by the Respondent died before it reached San Francisco (CR 133 at 28), and that the Respondent was not negligent (CR 133 at 23). Dr. Farmer's conclusions were also the basis for the opinion of another Respondent's witnesses, Dr. Dennis Schaberg. RT 1708-09.

As a rebuttal witness to Dr. Farmer, the Petitioners sought to present the testimony of Dr. Brian O'Brien, who earned a Ph.D. in bacteriology and epidemiology in 1969 from the University of California at Berkeley. RT 1715.

Serratia marcescens is one of the most basic bacteria known in the microbiological field. As part of Dr. O'Brien's

teaching duties, he utilizes serratia marcescens for experiments in which he acquaints his students with basic microbiological principles. RT 1725.

Even the Respondent and one of its primary witnesses admit that a Ph.D. microbiologist is knowledgeable about serratia marcescens. When Dr. Oram Woolpert, the former Technical Director of Camp Detrick, was asked on direct examination whether he had any personal experience with serratia marcescens previous to his work at Camp Detrick, he replied: "Oh, yes. Oh, yes. Every person who has taken the freshman course in bacteriology will have seen serratia marcescens." RT 578.

In its appellate brief before the Ninth Circuit the Respondent relied on that statement of Dr. Woolpert when it described serratia marcescens as "a bacteria which all microbiologists were familiar with from their earliest training." Brief for Appellee, at 14.

Despite the absence of a jury, the trial court refused to allow Dr. O'Brien to testify. The trial court did this on its own initiative despite the fact that the trial counsel for the Respondent had not expressed any intention to prohibit Dr. O'Brien from testifying. RT 1745. Counsel for the Respondent did not express any desire to prevent Dr. O'Brien from testifying until after the trial court had acted unilaterally. RT 1753-54.

The trial court's rationale for ruling that Dr. O'Brien did not qualify as an expert witness was that, according to the trial court, Dr. O'Brien had not had enough actual work experience with serratia marcescens. RT 1727, 1746, 1749. The trial court never stated how much experience would have been sufficient. Of course, since Dr. O'Brien possessed

a Ph.D. in bacteriology and epidemiology, there is nothing in the record to indicate that he lacked *knowledge* about serratia marcescens or the microbiological issues involved in this case.

The Rulings Below

Both the District Court and the Court of Appeals utilized the "planning/operational" test and found that the Respondent was immune from suit pursuant to the discretionary function exception to the FTCA, 28 U.S.C. 2680(a). The District Court also ruled that the respondent had not acted negligently and had not caused the decedent's death. The Court of Appeals only discussed the immunity issue, and upheld the District Court in a 2 to 1 decision. In so doing, the Court of Appeals chose not to discuss several issues, including the District Court's refusal to hear the testimony of Petitioners' proffered expert witness, and the District Court's findings on negligence and causation.

REASONS FOR GRANTING WRIT

I

CERTIORARI SHOULD BE GRANTED TO RESOLVE CONFLICTS IN PRINCIPLE AMONG THE LOWER COURTS WITH REGARD TO THE IMMUNITY ISSUE

In the present case, the Ninth Circuit agreed with the trial court that the Respondent was immune from suit under the discretionary function exception to the FTCA, 28 U.S.C. 2680(a). In so doing, the Ninth Circuit stated: "In this Circuit, whether an act or omission falls within the exemption depends generally on whether that act or omission occurred at the planning level or the operational level of government." *Nevin v. United States*, 696 F.2d 1229, 1230 (9th Cir. 1983).

Thus, the Ninth Circuit utilized the largely discredited "planning/operational" test, rather than the "basic policy decision" test used by more enlightened courts. Because of this substantial conflict among the circuits on such an important issue, the United States Supreme Court should hear this case.

The case law discussing the discretionary function exception to the FTCA is largely confused, and in many cases, contradictory. This is largely due to the fact that there has only been one United States Supreme Court opinion that has directly involved the discretionary function exception. This was *Dalehite v. United States*, 346 U.S. 15 (1953), decided almost 30 years ago, when the FTCA was only 7 years old. *Dalehite* was a 4 to 3 opinion written by Justice Stanley Reed. He was joined by Justices Burton and Minton, and by Chief Justice Vinson. Justices Douglas and Clark took no part in the consideration or decision of that case. The vigorous dissent was written by Justice Robert H. Jackson and joined in by Justices Black and Frankfurter. *Dalehite*, 346 U.S. at 47-60.

Much of the *Dalehite* opinion failed to survive the decade of the fifties. According to the leading scholar on the FTCA, Lester S. Jayson:

> To the extent that *Dalehite* held that no action will lie against the United States under the Act for negligence in the performance of an activity which has no private analogy, it was sharply curtailed by the Court's subsequent decision in the *Indian Towing* case *Indian Towing Co. v. United States*, 350 U.S. 61 (1955) and, with reference to liability for negligence in fire-fighting, later flatly overruled in the *Rayonier* case [*Rayonier, Inc. v. United States*, 352 U.S. 315 (1957)]. L. Jayson, *Handling Federal Tort Claims*, Sec. 82, at 3-45 to 3-46 (1982).

The *Dalehite* opinion contained two passages which became the genesis of two different modes of interpreting the discretionary function exception. The first of these was the Court's statement that: "Where there is room for policy judgment and decision there is discretion." *Dalehite*, 346 U.S. at 30. The second passage was:

> The decisions held culpable were all responsibly made at planning rather than operational level and involved considerations more or less important to the practicability of the Government's fertilizer program. *Dalehite*, 346 U.S. at 42.

Therefore, two bodies of law have evolved interpreting the discretionary function exception. The first one focuses on the nature of the decision that is in issue. When such a decision involves a balancing of political, social, military or economic factors, it is a "basic policy decision" that was intended to be protected from judicial review out of a concern for the separation of powers.

The second mode of interpretation focuses on the echelon of the official making the decision rather than the nature of the decision itself. Courts utilizing this approach look primarily at whether the official was at a "planning" or "operational" level. The discretionary function exception is then held to apply if the official making the decision was at the "planning" level. Courts utilizing the "planning/operational" level approach do so despite the fact that the passage in *Dalehite* from which the approach was derived also mentions that the decisions "*involved considerations* more or less important to the practicability of the Government's fertilizer program." *Dalehite*, 356 U.S. at 42 (emphasis added). Thus, the "planning/operational" test from *Dalehite* that focuses primarily on the echelon of the

decision maker, was in fact, infused from the very beginning with the "basic policy decision" test that focuses on the nature of the decision that was made. Therefore, the many courts that have relied on the "planning/operational" test have been misreading *Dalehite*. *See generally, Blessing v. United States,* 447 F.Supp. 1160, 1174 n.20 (E.D. Penn. 1978).

The fundamental conflict in principle between those courts utilizing the "planning/operational" or "basic policy decision" test is clearly evident from Lestor Jayson's treatise on the FTCA. Therefore, the extent of this judicial conflict is best set forth in large part, by an expansive quotation from that treatise.

In discussing the "planning/operational" test, Mr. Jayson states:

> "There has been a growing body of decisional law utilizing the 'planning level' versus 'operational level' dichotomy as a ready formula for solving the frequently difficult problem of application of the discretionary function exception. Under this approach, discretionary acts of officials at the planning level are regarded as within the exclusion of Section 2680(a) but discretionary acts of operational-level officials are not. In the words of the dissenting Justices in *Dalehite, who like the majority in the case, rejected this view,* the application of the exception would be determined 'not by whether an act was discretionary but by who exercised the discretion.'
>
> *This standard, looking solely to the echelon of the official rather than to the discretionary nature of his conduct, is useful as a general guide but seems unsound as a conclusive test for application of the exception.* It has no warrant in the specific language of the Tort Claims Act or in the legislative history of

§ 2680(a). It is inconsistent with many of the non-Tort Claims Act cases from which the meaning of the discretionary function phrase is derived. Moreover, far from clarifying the already difficult problem of application of the exception, injecting this standard would in many cases merely compound the difficulty with additional confusion and vagueness because, necessarily, it immediately creates the further problem of setting up criteria for determining what activity is at the operational level and what is not.

"Adoption of this standard as a conclusive test would require that § 2680(a) be read with language which simply does not appear there. Nor do the congressional committee reports explaining § 2680(a) indicate in any way that only high-level policy planning was to be immune. On the contrary, some of the illustrations of intended application of the exclusion given in the reports could well occur at the so-called operational level. For example, directing the expenditure of federal funds, or a negligent exercise of the blacklisting or freezing powers by the Treasury Department, or certain regulatory acts of officials of the Federal Trade Commission or the Securities and Exchange Commission, could surely be operational-level conduct.

"The non-Tort Claims Act cases, from which the discretionary function concept is derived, did not make any distinction between planning-level and operational-level conduct, but instead emphasized the discretionary nature of the conduct involved. And many of those cases involved officials at the operational level who were given personal immunity from suit under the doctrine. Similarly, cases under the Tort Claims Act have applied the exclusion to the conduct of federal employees who were not at the highest planning level.

"The cases which rely on the dichotomy do so on the basis of language in the Supreme Court's decisions in

the *Dalehite, Indian Towing Co.*, and *Union Trust Co.* cases. But a careful reading of these cases raises considerable doubt that the Supreme Court has actually passed on the point. In the *Dalehite* case, the Supreme Court did not limit the exception merely to high-level policy judgment and deny it to discretionary acts at the operational level. On the contrary, after holding that the words of the exception cover 'Not only agencies of government . . . but *all* employees exercising discretion,' the Court set out the claimants' argument on the point and then declined to accept the limitation, saying that 'It is unnecessary to define, apart from this case, precisely where discretion ends.' The Court went on to point out, however, that in that case the decisions which the District Court found to be negligent 'were all responsibly made at a planning rather than operational level,' and it is this remark which has been the springboard for the distinction.

"The "*Indian Towing Co.* decision makes a passing reference to *Dalehite's* mention of operational-level conduct, but, since the discretionary function exception was not directly involved in that case, as the court itself stated, that case is not a definitive holding in support of the distinction as a conclusive test for application of the exclusion. Nor is the Supreme Court's *per curiam* affirmance of the *Union Trust* case indicative of its acceptance of the distinction as a conclusive test. The Government's principal argument in that case dealt with the uniquely governmental nature of air traffic control and with the alleged lack of a private liability analogy, as required by Section 2674 of the Act, in connection with that activity. This was the only issue of the *Indian Towing Co.* case, and in affirming *Union Trust* summarily, the Supreme Court cited *Indian Towing Co.* alone, thus indicating the principal ground of the affirmance, namely, rejection of the uniquely governmental function argument.

It is certainly arguable, therefore, that the Supreme Court has not held that the official's level or echelon determines the applicability of the discretionary function exception. *It would surely be more consistent with the language of Section 2680(a), with the non-Tort Claims Act cases, and with many decisions decided under the Act, to determine the applicability of the exclusion by the discretionary nature of the act.* The level of the official acting may properly be taken into account in determining whether the duties of his office normally involve the exercise of judgment and discretion. It would seem to be wiser to approach the problem of application of the exclusionary language of Section 2680(a) by determining whether the negligent conduct occurred in connection with the execution of the overall plan, and by applying the principles discussed above in that connection." L. Jayson, *Handling Federal Tort Claims,* section 29.07, at 12-134 to 12-140 (1982) (footnotes omitted; emphasis added).

Mr. Jayson concludes this section of his treatise with an extensive footnote showing how other Circuits have utilized the "basic policy determination" approach and rejected the "planning/operational" test:

"The planning level-operational level distinction as a conclusive test was rejected by the Sixth Circuit in *Downs v. United States,* 522 F.2d 990, 996-997 (6th Cir. [Tenn.] 1975): 'Numerous Circuit and District Courts have struggled to mold the sparse legislative history and the language of *Dalehite* into a precise standard, often seizing upon the planning level-operational level distinction as a ready solution to the problem. . . . This distinction is based on the status of the official making a judgment. While offering some general guidance, it is not a sufficient test for determining whether a Government employee's actions are within the exception. . . . We believe that the basic

question concerning the exception is whether the judgments of a Government employee are of "the nature and quality" which Congress intended to put beyond judicial review. . . . Congress intended "discretionary functions" to encompass those activities which entail the formulation of governmental policy, whatever the rank of those so engaged.'

"In *Smith v. United States*, 375 F.2d 243, 246 (5th Cir. [Ga.] 1967), *cert. den.* 389 U.S. 841 (1967), holding non-actionable a claim based upon a U.S. Attorney's failure to prosecute a violation of law, the court rejected an 'absolutist' interpretation of the *Dalehite* decision that *any* federal official vested with decision-making power is thereby invested with sufficient discretion for the Government to withstand suit through application of the discretionary function exclusion. But the court also rejected as "specious" the planning v. operational-level conduct test as the answer to the problem. Cases under the Act, observed the Fifth Circuit, 'put courts to the questions of what sorts of decisions can be classified as resulting from discretion within the meaning of § 2680(a). It is not a sufficient defense for the Government merely to point out that some decision-making power was exercised by the official whose act was questioned. Answering these questions, a difficult process, is not aided by importation of the planning stage-operation stage standard as argued by [claimant]. Such a distinction is specious. It may be a makeweight in easy cases where of course it is not needed, but in difficult cases it proves to be another example of a distinction "so fine spun and capricious as to be almost incapable of being held in the mind for adequate formulation." . . . Such non-statutory "aids" to construction tend to obscure, to limit, or even to replace the standards whose meaning they are supposed to clarify. . . . It must be remembered that the question at hand here is the nature and

quality of the discretion involved in the acts complained of.'

"And see *Coastwise Packet Co. v. United States,* 277 F.Supp. 920, 924 (D. Mass. 1968), *aff'd.* 398 F.2d 77 (1st Cir. 1968), *cert. den.* 393 U.S. 937 (1968), indicating that there is some question whether 'the so-called "planning stage-operational stage standard" used by some of the Circuits in construing the discretionary function exception' is to be accepted." L. Jayson, *Handling Federal Tort Claims,* section 249.07, at 12-140, n.16 (1982).

Many other cases have been determined by use of the "basic policy decision" test: *Payton v. United States,* 636 F.2d 132, 135-38, 143-45 (5th Cir. 1981) (stating the planning/operational level test "obviously looked to the level at which the activity complained of took place as being indicative of the proper result. . . . Unfortunately, such a standard is conclusionary and does not really aid the process."); *Canadian Transport Company v. United States,* 663 F.2d 1081, 1086-87 (D.C. Cir. 1980) ("We think however that the result in this case should not turn upon whether the Coast Guard's actions can be labeled as 'planning' or 'operational.' "); *Miller v. United States,* 583 F.2d 857, 866-67 (6th Cir. 1978); *Griffin v. United States,* 500 F.2d 1059, 1063-69 (3d Cir. 1974) ("To determine the applicability of the discretionary function, exception, therefore, we must analyze not merely whether judgment was exercised, but also whether the nature of the judgment called for policy considerations."); *Hendry v. United States,* 418 F.2d 774, 780-83 (2d Cir. 1969); *Allen v. United States,* 527 F.Supp. 476, 479-88 (D. Utah 1981) ("The 'planning/operational' distinction offered by Justice Reed in *Dalehite* has grown increasingly ineffective in harmonizing the

results of subsequent cases."); *Liuzzo v. United States*, 508 F.Supp. 923, 930-33 (E.D. Mich. 1981) (After noting that the planning/operational test focuses on the status of the person making the judgment, the court stated that it "is not a sufficient test for determining whether any claim is barred by section 2680(a) . . . ."); *Medley v. United States*, 480 F.Supp. 1005, 1007-09 (M.D. Ala. 1979); *DePass v. United States*, 479 F.Supp. 373, 374-78 (D. Md. 1979) ("This Court rejects the 'planning level/operational level' test offered by the plaintiff. . . . The test is an artificial one."); *Blessing v. United States*, 447 F.Supp. 1160, 1167-86 (E.D. Pa. 1978) (The discretionary function exception was designed to embody "the fundamental separation of powers dogma;" the exception "focuses on policy input as the hallmark of protected discretion;" "it is arguable that a dichotomy based on 'planning level' activity is not much more helpful in application than one simply based on 'discretion.'").

The preceding cases clearly demonstrate that the "basic policy decision" test is preferred over the "planning/operational" test by courts from seven different Circuits, including the Second, Third, Fourth, Fifth, Sixth, Tenth and D.C. Circuits. In sharp contrast to all of these cases, stands the Ninth Circuit's reliance on the "planning/operational" test as utilized in *Nevin v. United States*, 696 F.2d at 1230. A sharper conflict between the circuits could not exist regarding such a fundamental principle.

The reasons why this Court should grant certiorari as to the issue of discretionary function immunity are truly compelling:

1. There will never be, it is hoped, a factual situation like this one presented to the court again. Apart from the

serious ethical considerations which permeate this case which it should be recognized that the facts are perfectly conducive to a judicial analysis of the competing tests used to determine the application of the discretionary function exception.

2. We are dealing with one of the most important and most litigated areas of federal law. Discretionary function immunity is raised in almost every case brought under the FTCA. The cases attempting to decipher it are legion. Only this Court can clarify this area of the law so as to substantially decrease the confusion that creates such a needless expenditure of judicial resources.

3. As clearly demonstrated above, there is a sharp and substantial conflict between the circuits regarding the proper test for application of the discretionary function exception. This conflict is not merely a difference over semantics. It represents a fundamental disagreement among the circuits as to the very purpose and meaning of the discretionary function exception. Only the Supreme Court can put an end to this confusion.

4. It should be emphasized that this Court has only heard one case in which the discretionary function exception was an issue. That was nearly thirty years ago in *Dalehite*. At that time, the FTCA was only 7 years old. Very few lower courts had interpreted the discretionary function exception at the time of *Dalehite*. Today, this Court has the benefit of hundreds of lower court opinions that set forth numerous analyses of the issue. Just as important is the significant body of scholarly commentary discussing the discretionary function exception existing today which was virtually nonexistent in 1953. In addition

to the hundreds of law review articles, there are also major treatises that explore the issue, such as Lestor Jayson's *Handling Federal Tort Claims,* referred to earlier, and Professor Kenneth Culp Davis' *Administrative Law Treatise,* recently supplemented in 1982.

The extensive body of commentary and cases developed over the 30 years since *Dalehite* not only provides a rich resource to this Court, but also serves as direct evidence of the confusion and conflict infesting this area of the law.

II

CERTIORARI SHOULD BE GRANTED BECAUSE THE TRIAL COURT MISINTERPRETED FEDERAL RULE OF EVIDENCE 702

The trial court refused to hear testimony from Petitioners' proferred witness, Dr. Brian O'Brien, who earned a Ph.D. in bacteriology and epidemiology from the University of California at Berkeley in 1969. RT 1715. The trial court stated that Dr. O'Brien had "not worked on serratia marcescens to the degree sufficient to give evidence in this case. . . ." RT 1746. *See also,* RT 1727, 1749. The trial court failed to mention what the "degree sufficient" would have been.

The trial court ignored a key fact established in the record, that serratia marcescens is a basic bacterium with which all microbiologists have had experience (RT 578) and that Dr. O'Brien uses serratia marcescens when teaching his students about microbiology (RT 1725). Thus, the trial court's assertion that Dr. O'Brien lacked experience with serratia marcescens is without foundation in the record.

In addition to ignoring Dr. O'Brien's actual *experience* with serratia marcescens, the trial court's exclusive focus on the "experience" factor was in direct contravention of Federal Rule of Evidence 702. This rule speaks of "knowledge, skill, experience, training or education" as being sufficient to qualify a witness as an expert. There is no case interpreting Federal Rule of Evidence 702 as requiring an expert to possess all five elements. Rather, these elements are stated in the alternative, so any one of them alone is sufficient.

Since Dr. O'Brien has a Ph.D. in microbiology and epidemiology, there is no question that he has the *knowledge* necessary to qualify as an expert witness in this case. By failing to interpret Federal Rule of Evidence 702 as allowing for the qualification of an expert witness on the basis of knowledge alone, the trial court departed so far from the accepted and usual course of judicial proceedings so as to call for an exercise of this Court's power of supervision.

The testimony of expert witnesses has become a regular feature of our legal system. In countless cases the testimony of experts has been determinative. In order to insure that the legal system continues to benefit from the participation of experts, the rules by which they testify must be scrupulously protected. Any degredation of those rules is a direct assault on the legal system itself. Therefore, it is vital that this Court exercise its supervisory power to ensure that the rules regarding the testimony of expert witnesses are obeyed by the lower courts.

When a trial court has gone so far as to prohibit the testimony of a witness with a Ph.D. in the very subject matter being litigated, and this conduct is thereafter

ignored by the Court of Appeals, it is time for this Court to act, or Federal Rule of Evidence 702 is in danger of being seriously weakened with resultant deprivation of full and fair evidentiary hearing.

III

CERTIORARI SHOULD BE GRANTED ON THE ISSUES OF NEGLIGENCE AND CAUSATION SO THAT A FULL AND FAIR HEARING CONDUCTED IN CONFORMITY WITH FRE 702 CAN OCCUR

As yet, there has been no full and fair hearing on the issues of negligence and causation. By prohibiting the testimony of Dr. O'Brien, the trial court prevented Petitioners from presenting their *most important* evidence on these issues.

With regard to the issue of negligence, it must be remembered that during his direct testimony, the man who was the Technical Director of Camp Detrick at the time of the spraying, Dr. Oram Woolpert, testified that it was known both to his staff, and the Safety Director, before 1950, that serratia marcescens was an organism that could cause injury to debilitated persons. RT 868. *See generally,* RT 716-21, 761-63, 820-21 and 843.

The significance of Dr. Woolpert's candid admission was entirely missed by the trial court. Nowhere in the trial court's decision is any reference made to Dr. Woolpert's testimony on this point. In fact, the trial court found that serratia marcescens was not known to be an organism capable of harming debilitated persons "until well after the 1950 field tests on San Francisco." CR 133 at 22. This finding by the trial court is without *any* support in the record, and is directly opposed by the uncontradicted testimony of one of the actual participants in the incident.

Had Dr. O'Brien been allowed to testify as a rebuttal witness, the significance of Dr. Woolpert's admission could have been explained to the trial court. Although Petitioners' counsel was able to refer to Dr. Woolpert's admission during closing argument, counsel's statements did not constitute evidence. Dr. O'Brien's testimony would have constituted evidence, so the trial court would have had to consider it.

Moreover, the closing argument of Petitioners' counsel was no substitute for the knowledgeable expert analysis of Dr. Woolpert's admission that could have been provided by Dr. O'Brien.

With regard to the issue of causation, the heart of Respondent's case was the testimony of Dr. James Farmer, who allegedly demonstrated that the decedent died from a strain of serratia marcescens different from the one used in the spraying, thus convincing the trial court that the Respondent's spraying did not cause decedent's death. CR 133 at 25, 30-33.

The prohibition of Dr. O'Brien's testimony precluded Petitioners from presenting any evidence in rebuttal to Dr. Farmer. Therefore, the trial court deprived itself of the opportunity to hear any knowledgeable critique of Dr. Farmer's testimony.

Because the trial court's findings with regard to negligence and causation were based on an incomplete record, they should not be given any conclusive effect and this Court should order a new trial so that Petitioners can obtain the full and fair hearing to which they are entitled.

CONCLUSION

For the reasons stated this Writ should be granted so that the sharp and substantial conflict between the Circuits regarding proper test for application of the discretionary function exception can be resolved.

In addition, this Writ should be granted so that upon favorable resolution of the discretionary function exception conflict, the Trial Courts can be given guidance concerning the requirement of liberality in determining admissibility of expert testimony in order to assure full and fair hearing on issues of scientific negligence and the causal relationship of that negligence to injury.

Respectfully submitted,

Edward J. Nevin, III
Attorney for Petitioners

Allan J. Favish
Of Counsel

Appendix A

Mabel Nevin, et al.,
Plaintiffs-Appellants,

v.

United States of America,
Defendant-Appellee.

No. 81-4365.

United States Court of Appeals,
Ninth Circuit.

Argued and Submitted July 14, 1982.

Decided Jan. 17, 1983.

Wrongful death action was brought under the Federal Tort Claims Act claiming that death occurred as result of Government's negligence in conducting simulated biological warfare attack on San Francisco in 1950. The United States District Court for the Northern District of California, Samuel Conti, J., concluded in part that Government was immune from suit, and appeal was taken. The Court of Appeals, Choy, Circuit Judge, held that chief chemical officer's decision to use particular strain of bacterium in simulated attack was made at the planning level and thus was exempt as discretionary function under the Tort Claims Act.

Vacated and remanded.

Norris, Circuit Judge, filed a dissenting opinion.

1. United States—78(12)

Purpose of discretionary function exemption under the Federal Tort Claims Act is to permit government to make

planning level decisions without fear of suit. 28 U.S. C.A. § 2680(a).

2. United States—78(12)

Whether act or omission falls within discretionary function exemption under the Federal Tort Claims Act depends generally on whether act or omission occurred at planning level or operational level of government. 28 U.S.C.A. § 2680(a).

3. United States—78(12)

Decision by chief chemical officer, who was responsible for final authorization of all test plans concerning biological warfare vulnerability, to use particular strain of bacterium in simulated biological warfare attack on San Francisco in 1950 was made at the planning level and thus decision to use particular strain of bacterium was exempt as a discretionary function under the Federal Tort Claims Act. 28 U.S.C.A. § 2680(a).

4. United States—78(12)

Whether discretionary function exemption under Federal Tort Claims Act applies is question of subject-matter jurisdiction. 28 U.S.C.A. § 2680(a).

Edward J. Nevin, San Francisco, Cal., Allan Jay Favish, Fogle, Rothschild, Feldman & Ostrove, Los Angeles, Cal., for plaintiffs-appellants.

George C. Stoll, Asst. U.S. Atty., San Francisco, Cal., for defendant-appellee.

Appeal from the United States District Court for the Northern District of California.

Before CHOY and NORRIS, Circuit Judges, and SMITH,* District Judge.

CHOY, Circuit Judge:

Relatives of Edward Nevin appeal from a judgment in favor of the United States in this wrongful-death action brought under the Federal Tort Claims Act (the FTCA), 28 U.S.C. § 1346(b). They claim that Nevin died as a result of the Government's negligence in conducting a simulated biological warfare attack on the City of San Francisco in 1950. The district court concluded in part that the Government was immune from suit because its acts fell within the discretionary function exemption to the FTCA, 28 U.S.C. § 2680(a).

On appeal, the Nevins concede that the selection of the test site fell within the discretionary function exemption, but argue that the selection of the strain of bacterium used did not. Even assuming that we should isolate the selection of the strain of bacterium from the selection of the site, we conclude that the decision to use the particular strain was exempt as a discretionary function.

[1] The discretionary function exemption provides, in pertinent part, that the United States has not waived sovereign immunity on

> [a]ny claim . . . based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.

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*The Honorable Russell E. Smith, Senior United States District Judge for the District of Montana, sitting by designation.

28 U.S.C. § 2680(a). The purpose of the exemption is to permit the government to make planning-level decisions without fear of suit. *Dalehite v. United States,* 346 U.S. 15, 32, 73 S.Ct. 956, 966, 97 L.Ed. 1427 (1953); *Lindgren v. United States,* 665 F.2d 978, 980 (9th Cir. 1982).

[2] In this circuit, whether an act or omission falls within the exemption depends generally on whether that act or omission occurred at the planning level or the operational level of government. *Weiss v. Lehman,* 676 F.2d 1320, 1322 (9th Cir. 1982), *petition for cert. filed,* 51 U.S.L.W. 3289 (U.S. October 12, 1982) (No. 82-532); *Lindgren,* 665 F.2d at 980. In making the determination, we have also considered the ability of the judiciary to evaluate the act or omission and whether the judicial evaluation would impair the effective administration of the government. *Lindgren,* 665 F.2d at 980 (*citing Driscoll v. United States,* 525 F.2d 136, 138 (9th Cir. 1975)).

[3] There is ample evidence in the record to support the conclusion that the decision by the Chief Chemical Officer, General Anthony McAuliffe, to use the particular strain of bacterium was made at the planning level. It is undisputed that General McAuliffe was responsible for the final authorization of *all* test plans concerning biological warfare vulnerability. He made the decision to use San Francisco as the site. He personally approved the selection of *serratia marcescens* recommended by scientific and medical advisory personnel. That approval came only after General McAuliffe and one of his fellow officers conducted independent evaluations concerning the safety of the strain of bacterium. The final decision of whether to proceed with any given test or program rested with General McAuliffe

and, as the district court noted, "although he tended to rely on his technical advisors he was not bound to do so. . . . General McAuliffe could have withheld his approval for the test for any reason, including the technical advice he was given or simply on his own judgment as to the inadvisability of conducting the test." Indeed, General McAuliffe himself rejected the plan to conduct a test using the same strain in the subways of New York.

In making the decisions concerning the testing, including which strain of bacterium to use, General McAuliffe had to weigh numerous factors, including concerns for national security, a need for secrecy, the possible risks of urban testing, and applicable medical concerns. As the Nevins admit, the higher the governmental rank involved in making any decision of this type, the more likely it is that political, social, military and economic factors were weighed. Upon careful reflection, we do not think that this court is equipped to weigh the type of factors involved in such a basic policy determination. In addition, our review would likely impair the effective administration of government programs believed to be vital to the defense of the United States at the time that they are conducted.

[4] In summary, none of the considerations we examine to determine the applicability of the discretionary function exemption calls for reversal of the district court's determination. Whether the discretionary function exemption applies, however, is a question of subject-matter jurisdiction. *Lindgren,* 665 F.2d at 983. We must, therefore, vacate the judgment of the district court and remand the case with instruction to dismiss the action for lack of subject-matter jurisdiction.

VACATED and REMANDED.

NORRIS, Circuit Judge, dissenting:

I cannot agree that General McAuliffe's decision to use a particular strain of bacterium in conducting a simulated biological attack on the City of San Francisco falls within the discretionary function exemption to the Federal Tort Claims Act, 28 U.S.C. § 2680(a) (1976).

That decision, in my view, was made at the operational, not the planning level of government. As appellant readily concedes, the decision to conduct a simulated attack on San Francisco was a planning decision that did fall within the exemption. It required the weighing of political, social and military factors and, as such, is a decision the judiciary is ill-equipped to review. But once that policy decision was made, its execution necessarily involved a myriad of decisions at the operational level which are not insulated from judicial review.[1] The choice of bacterium was one such decision. 8 UK was chosen not on the basis of political or mili-

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[1]*See S.A. Emprasa De Viacao Aerea Rio Grandense v. United States*, 692 F.2d 1205, 1208 (9th Cir. 1982) ("The discretionary function exemption was primarily intended to preclude tort claims arising from decisions by executives or administrators when such decisions require policy choices."); *Miller v. United States*, 583 F.2d 857, 866 (6th Cir. 1978) ("The discretionary function exception does not insulate the Government from liability for all mistakes of judgment of its agents, but only for significant policy and political decisions, the type of governmental decisions which should not be circumscribed by customary tort standards."); *Griffin v. United States*, 500 F.2d 1059, 1066 (3d Cir. 1974) ("Where the conduct of Government employees in implementing agency regulations requires only performance of scientific evaluation and not the formulation of policy, we do not believe that the conduct is immunized from judicial review as a 'discretionary function.' ")

tary concerns, but on the basis of medical and scientific ones. Care had to be exercised in selecting a bacterium that would not constitute a health hazard. Whether there was failure to exercise due care in making that decision is the type of question frequently subjected to judicial scrutiny. *See United States v. DeCamp*, 478 F.2d 1188 (9th Cir.), *cert. denied* 414 U.S. 924 (1973); *Hendry v. United States*, 418 F.2d 774, 783 (2d Cir. 1969) ("[t]he judgments arrived at by the doctors are not different in complexity from those which courts are accustomed to entertain when tort suits are brought against private physicians.")

I would hold that the district court had subject matter jurisdiction over plaintiff's action, but would affirm the judgment on the ground that the district court's finding that the bacteria used by the Army did not cause Nevin's death was not clearly erroneous.

United States District Court
Northern District of California

No. C-78-1713 SC

Mabel Nevin, et al.,
Plaintiffs,

vs.

United States of America,
Defendant.

[Filed May 20, 1981]

JUDGMENT

It is hereby ordered, adjudged and decreed that judgment shall be entered in favor of defendant and against plaintiffs, in accordance with the Findings of Fact and Conclusions of Law filed by the court herein.

Dated: May 20, 1981.

SAMUEL CONTI
United States District Judge

United States District Court
Northern District of California

No. C-78-1713 SC

Mabel Nevin, et al.,
Plaintiffs,

vs.

United States of America,
Defendant.

[Filed May 20, 1981]

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The above matter came on regularly for trial, without a jury, on the 16th day of March, 1981, plaintiffs being represented by Edward J. Nevin, Esq., and the defandant United States of America being represented by Assistant U.S. Attorney John D. Kern, Esq.

INTRODUCTION

This is a wrongful death action brought against the United States pursuant to the Federal Tort Claims Act, Title 28 U.S.C. § 1346(b). The plaintiffs are the descendants and relatives of Edward Nevin, who died in 1950 in San Francisco. The plaintiffs allege that Mr. Nevin died as a result of the negligence of the United States Government (hereinafter "the government" or "the United States") in conducting a biological warfare vulnerability test on the City of San Francisco in September of 1950. Specifically, the plaintiffs claim that the biological simulant released over the city during that test, a type of bacteria known as *Serratia marcescens*, strain SUK, infected the body of the decedent and caused his death.

The government's contentions have been that the United States is immune from suit for damages occurring as a result of this type of activity, that Edward Nevin's death was not caused by the bacteria used by the United States in the test, and that even if *Serratia marcescens,* strain 8UK, was the cause of death it was considered non-pathogenic at the time and therefore the use of it was not negligent. As to this last issue, the plaintiffs argue that if the government is found to have acted unreasonably, the burden of proof should be shifted in this case so that the United States would be required to establish that its actions did not cause the decedent's death, rather than the plaintiffs having to carry the burden of proving the cause of death.

The legal issues before the court are as follows:

(1) Has the United States waived sovereign immunity for a discretionary judgment made in providing for the national defense under 28 U.S.C. § 2680(a)?

(2) Did any negligence occur in 1950 in the choice of *Serratia marcescens,* strain 8UK, as a simulant?

(3) Did *Serratia marcescens,* strain 8UK, proximately cause any injury?

(4) Does the burden of proof shift in a case of this type and these circumstances?

After having reviewed all the evidence and heard the argument of counsel, the court makes the following findings of fact and conclusions of law.

I. SUMMARY OF FACTS

In September of 1950 the government conducted a series of six simulated biological warfare attacks on the San Francisco, California, area for experimental purposes. Other test were conducted around that time on naval vessels at Norfolk, Virginia, and on the Pentagon at Washington, D.C. The test agents (simulants) used at San Francisco were *Bacillus globigii* and *Serratia marcescens*. The former was released in four trials; the second, the subject of this lawsuit, was released on September 26 and 27, 1950.

The tests were accomplished by generating the bacterial aerosols from a ship located at various distances offshore. The trial area comprised the waters offshore from San Francisco, and extended across the city and into the East Bay region from Richmond to Alameda. The success of the simulated attacks was measured by a number of aerosol samplers installed at scattered locations throughout the trial area.

The decedent, Mr. Edward Nevin, was a 75 year old man suffering from arteriosclerotic heart disease, with mild failure, and moderately advanced prostatic hypertrophy. He had a retropubic prostatectomy performed in early September of 1950, some weeks before the Army's test was conducted. On or about October 1, 1950, decedent developed a fever and was hospitalized at the Stanford Hospital, San Francisco, California. Gram-negative chromogenic bacteria were isolated from his urine and despite extensive antibiotic treatment he died on November 1, 1950. The direct cause of death was septicemia, and his treating physician, Dr. Richard Wheat, believed that the chromo-

bacterial infection which was superimposed on his previous valvular heart disease led to his demise. The course of Edward Nevin's fatal illness was recorded in an article published by Dr. Wheat in October, 1951, which described a series of eleven cases in which chromobacteria, "probably *Serratia marcescens*," were isolated from patients at Stanford Hospital (including Edward Nevin). Years later, in 1978, after release of classified government documents which revealed that *Serratia marcescens* was used during the 1950 San Francisco tests, this lawsuit was commenced.

II. GOVERNMENTAL IMMUNITY UNDER THE FEDERAL TORT CLAIMS ACT; THE DISCRETIONARY FUNCTION EXCEPTION

A. The Legal Standard

Historically, governmental entities are immune from suits for tortious acts committed by government officials, although this sovereign immunity may be waived, in whole or in part, by an appropriate statute. The Federal Tort Claims Act, Title 18, U.S.C. §2671, *et seq.*, under which the plaintiff bring this action, waives sovereign immunity but makes an exception for "discretionary functions" of the government. Title 28 U.S.C. § 2680, provides, in pertinent part, that:

> The provisions of this chapter . . . shall not apply to (a) any claim . . . based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the government, whether or not the discretion involved be abused.

Thus, sovereign immunity is not waived if, as the government maintains in this case, the acts being sued upon were

undertaken as part of the government's "discretionary function." Specifically, the government contends that the acts in question here constituted the discretionary function of providing for the national defense, so that they are not actionable under the Federal Tort Claims Act.

The seminal case on the question of discretionary function is *Dalehite v. United States,* 346 U.S. 15, 97 L.Ed. 1427, 73 S.Ct. 956 (1953). In that case, 8,485 plaintiffs sued for damages resulting from the disastrous explosion at Texas City, Texas, of Fertilizer Grade Ammonium Nitrate (FGAN) while aboard a vessel in the harbor. Five hundred and sixty (560) persons were killed as a result of the explosion. The FGAN had been produced for the United States pursuant to a program designed to increase the food supply of devastated areas in occupied enemy countries following World War II. The Supreme Court denied plaintiffs' claim of negligence against those federal officials and employees involved in the program and held that the actions fell within the discretionary function exception.

Although subsequent decisions have somewhat qualified the Court's opinion in *Dalehite*, it continues to stand for the proposition that the discretionary function exception is limited to decisions made by officials at the planning rather than the operational level. *See, Dalehite v. United States, supra,* 346 U.S. at 42; *McGarry v. United States,* 549 F.2d 587, 591 (9th Cir. 1976), *cert. denied,* 434 U.S. 922; *Driscoll v. United States,* 525 F.2d 136, 138 (9th Cir. 1975).

The plaintiffs' position here, of course, is that the testing in this case was not within the discretionary function exception. Briefly, plaintiffs' argument is that while a

committee which approved the test might have been a point at which the discretionary function applied, the negligence of the government occurred later—in the administration of the tests. If plaintiffs are correct and the government was negligent during an operational phase in carrying out the mandate of a discretionary body, there would be no discretionary immunity.

B. Findings and Conclusions

The specific question to be answered is whether the government's activity in using San Francisco as the site for a simulated biological warfare attack was within the discretionary function exception to the Federal Tort Claims Act. Answering that question requires the court to identify which individual or group made the decision to conduct the San Francisco experiment and to inquire whether that government level held discretionary authority. It is the court's finding that that decision was indeed made at a discretionary level and that, therefore, the United States is immune from suit under the Federal Tort Claims Act. In conjunction with the foregoing conclusion of law, the court makes the following findings of fact regarding the development of biological warfare operations in the United States, and regarding the authority vested in various departments, committees, and individuals concerning biological warfare research in general, and over the San Francisco test in particular.

On April 29, 1942, Secretary of War Stimson wrote to the President of the United States, Franklin D. Roosevelt:

> Some time ago it was called to my attention through my representative in the Office of Scientific Research

and Development, of which Dr. Bush is the Director, that there might be serious dangers to this country from what might be described as "Biological Warfare." It seemed well to make a preliminary investigation with great secrecy. Accordingly, I asked Dr. Jewett of the National Academy of Sciences to form a Secret Committee of eminent biologists to consider the question. Such a committee was appointed, including a number of the most important biologists in the country.

* * * *

This committee has made an extensive study and a very thorough report in which it points out that real danger from biological warfare exists for both human beings and for plant and animal life. The committee recommends prompt action along a number of lines, some involving the development of vaccines, some dealing with scientific techniques of defense. Others involve protective measures such as water supply protection, and still others require further research. The matter which the committee considered as requiring the most immediate attention is the great danger of attacks on our cattle with the disease "Rinderpest" which has been at times most destructive in the Philippines.

Biological Warfare is, of course, "dirty business" but in the light of the committee's report, I think we must be prepared. And the matter must be handled with great secrecy as well as great vigor. The immediate question is through what agency of the Government and under what individual leadership this should be started. I am confident that a single able man as director is one of the first essentials.

Some of the scientists consulted believe that this is a matter for the War Department but the General Staff

is of the opinion that a civilian agency is preferable, provided that proper Army and Navy representatives are associated in the work. It is evident that the matter deals primarily with the Public Health and to some extent with matters ordinarily in charge of the Department of Agriculture. Entrusting the matter to a civilian agency would help in preventing the public from being unduly exercised over any ideas that the War Department might be contemplating the use of this weapon offensively. To be sure, a knowledge of offensive possibilities will necessarily be developed because no proper defense can be prepared without a thorough study of means of offense. Offensive possibilities should be known to the War Department. And reprisals by us are perhaps not beyond the bounds of possibility any more than they are in the field of gas attack for which the Chemical Warfare Service of the War Department is prepared.

* * * *

The choice of the right man to be put at the head of this activity seems to me perhaps more important than where it is established in the Government.

Having asked for the report and having now received the disturbing warnings to which I have made reference and especially in view of the recommendation for immediate action[,] I should appreciate it if you would advise me of your wishes in order that such action as you wish may be promptly taken."

[Defendant's Exhibit 3, pp. 8-10.]

On May 15, 1942, President Roosevelt gave his verbal approval to the proposals in the foregoing letter. [Defendant's Exhibit 3, page 14.] That was the genesis of formal biological warfare research, for both offensive and defensive purposes, by the United States Military and, interest-

ingly, from this very early stage contemplated individual rather than group leadership of the biological warfare research unit. [Defendant's Exhibit 3, p.10.] The following month, the civilian agency recommended by Secretary of War Stimson was organized in the Federal Security Agency as the War Research Service with George W. Merck as Director. [Defendant's Exhibit 3, p.10.]

In November of 1942, the Chemical Warfare Service, forerunner to the Army Chemical Corps, was requested to cooperate actively in the expanding program of large-scale research and development, which resulted in the construction of Camp Detrick, Maryland, in 1943. [Defendant's Exhibit 3, pp.16-17.] The first task undertaken was the development of defensive measures against possible biological warfare attack. The War Research Service provided a specific advisor, Dr. Ira M. Baldwin, to the Chemical Warfare Service to direct the scientific aspects of its program in this field. According to his deposition, Dr. Baldwin was largely responsible for the technological development of the Special Projects Division of the Chemical Warfare Service (Camp Detrick).

From the beginning, Camp Detrick, though under the supervision of and largely staffed by the Chemical Warfare Service was, in fact, a combined service operation with personnel contributed by the Navy, by the Surgeon General of the Army, and from the ranks of qualified civilian scientists. [Defendant's Exhibit 3, p.18.] The technical director of Camp Detrick was Colonel Oram C. Woolpert, M.D., Ph.D. Dr. Woolpert's background as a physician was in the field of infectious disease, and as a microbiologist in the field of microbiology.

In June of 1944, President Roosevelt directed the War Department to assume full responsibility for the research and development program. By August 31, 1944, responsibility for the research programs sponsored by the War Research Service had been transferred to the Special Projects Division of the Chemical Warfare Service. On October 1, 1944, the Commanding General, Army Service Forces, placed the responsibility for work on biological warfare with the Chief of the Chemical Warfare Service. At this time Secretary of War Stimson appointed the United States Biological Warfare Committee, with George Merck as chairman, to advise him on policy matters. [Defendant's Exhibit 3, pp.22-23.]

In 1945, George Merck summarized the accomplishments at Camp Detrick during World War II. In his report, Mr. Merck also made the following recommendation:

> Although remarkable achievements can be recorded, the metes and bounds of this type of warfare have by no means been completely measured. Work in this field, born of the necessity of war, cannot be ignored in time of peace, it must be continued on a significant scale to provide an adequate defense.

[Defendant's Exhibit 4, p.6.]

On September 18, 1947, the Department of Defense, originally designated the National Military Establishment, was created and headed by the Secretary of Defense, a Cabinet officer. The command authority relating to biological warfare ran from the Office of the Secretary of Defense (OSD) through the Joint Chiefs of Staff and the Secretary of the Army, directly to the Chief Chemical Officer. [Defendant's Exhibit 11, pp.4-5, and Defendant's Exhibits 19 and 33.]

Inside the Chemical Corps, the chain of command ran from the Chief Chemical Officer to his Chief, Research and Engineering Division, Colonel William M. Creasy. Colonel Creasy was in direct control of all activities at Camp Detrick, and all activities emanating therefrom.

The overall technical direction of the biological warfare Research and Development Program was vested in the Research and Development Board of the OSD. That board carried out its responsibility for technical expertise through its Committee on Biological Warfare ("the Baldwin Committee") headed by Dr. Baldwin and composed of eminent consultant members from science, industry, government, and the Armed Services. The Baldwin Committee acted in an advisory capacity only and had no command authority, according to Dr. Baldwin.

On July 9, 1948, Secretary of Defense James Forrestal issued a memorandum to the Joint Chiefs of Staff on the subject of capabilities of biological warfare. The memorandum stated that:

> Agreement has been reached to create a unit under this office to engage in planning for defense against unconventional forms of attack, which includes, of course, the subversive use of biological agents.

[Defendant's Exhibit 5, p.3.]

In response to concerns about the vulnerability of the United States to covert attack, the Research and Development Board, OSD, requested its Committee on Biological Warfare to consider the implications of biological warfare and sabotage. [Defendant's Exhibit 6.] In response, in October of 1948, the Baldwin Committee submitted a

"Report on Special Biological Warfare Operations" which concluded that:

> (A) Biological agents would appear to be well adapted to subversive use;
>
> (B) The United States is particularly susceptible to attack by "special biological warfare operations" (Meaning subversive or covert actions involving the use of biological agents);
>
> (C) The subversive use of biological agents by a potential enemy prior to a declaration of war presents a grave danger to the United States; and
>
> (D) The biological warfare research and development program is not now authorized to meet the requirements necessary to prepare defensive measures against special biological warfare operations.

The report recommended "that the Secretary of Defense authorize the National Military Establishment to engage in research and development in the field of special biological warfare operations." [Defendant's Exhibit 6, p.8.] The recommendation was approved by the Secretary of Defense and was the basic authorization to conduct field tests, beginning in 1949, assessing the vulnerability of the United States to biological warfare attack. [Defendant's Exhibit 8, p.2.]

On June 27, 1949, the Chief of Staff of the Army, through the Acting Adjutant General of the Army, Brigadier General W. E. Bergin, wrote to the Chief Chemical Officer:

> "The Chief, Chemical Corps, is charged with the overall responsibility for planning, training, and research and development for all phases of biological warfare." [Defendant's Exhibit 19, p.1.]

Thus, the Chief Chemical Officer was vested with the authority to conduct biological warfare vulnerability tests.

On July 15, 1949, Dr. Baldwin's committee recommended large-scale field tests to the Secretary of Defense:

> The Committee has noted repeatedly the need for more extensive research on disseminating devices and techniques and on protective measures. The committee is of the opinion that evidence to support this trend can be obtained best from large-scale field trials. [Defendant's Exhibit 8, p.1.]

In the same report, the committee noted previous approval of its own report on special biological warfare operations:

> The committee recommended that research and development be undertaken in the field of biological warfare sabotage (special biological warfare operations), since in considered this important subject a serious gap in the biological warfare research and development program. In response to this recommendation, the Department of the Army is now organizing a group to carry out such research activities. [Defendant's Exhibit 8, p.2.]

The group mentioned by the Committee was the Special Operations Division at Camp Detrick.

The individual proposals for each of the vulnerability tests began with the scientists at Camp Detrick. A proposal would be reviewed by Dr. Woolpert, the technical director at Camp Detrick, or by Leroy D. Fothergill, his deputy director, and it would then be forwarded to the military chain of command for approval. The ultimate responsibility for the approval or disapproval of any test was placed with the Chief Chemical Officer, General Anthony McAuliffe. According to the testimony of Colonel Creasy,

who was on the staff of the Chief Chemical Officer, Creasy would present each proposal to one or more advisory committees which were outside the chain of command. The committee or committees would make recommendations on the test which, as a practical matter, the Chief Chemical Officer usually followed. Still, the final decision of whether or not to proceed with any given test or program rested with McAuliffe, and although he tended to rely on his technical advisors he was not bound to do so.

On December 12, 1949, Omar N. Bradley, General of the Army and Chairman of the Joint Chiefs of Staff, issued a memorandum entitled "Assignment of Responsibility for Chemical Warfare, Biological Warfare, and Radiological Warfare." He stated, after considering proposals for a shift in responsibility for biological warfare research that:

> The United States Army is also charged with responsibility for research and development in the field of biological warfare. This responsibility has been vested in the Chemical Corps, United States Army, and is being satisfactorily discharged. [Defendant's Exhibit 11, pp.4-5.]

In 1949 and 1950 tests were run to quantitatively establish the vulnerability of the Pentagon to sabotage with biological warfare agents. In 1950, the vulnerability of United States naval vessels to biological warfare attack was also tested. Both these tests involved the use of *Serratia marcescens,* and both tests exposed large numbers of human beings to that bacteria. [Defendant's Exhibits 12, 13, and 29.]

On June 30, 1950, the formal report of the Secretary of Defense's Ad Hoc Committee on Chemical, Biological and

Radiological Warfare, was submitted to George C. Marshall, Secretary of Defense. The committee was chaired by Mr. Earl P. Stevenson, and had begun work in October, 1949, to evaluate all aspects of the three fields. The committee stated, *inter alia,* that "increased effort is required to prepare the United States defensively and offensively for biological warfare." The committee also stated that:

> While data are available to indicate the potentialities of biological warfare as a weapon of war, the data are not complete enough to be used as a basis for operational planning . . . Nevertheless, many of the data needed to determine their operational feasibility and effectiveness could be obtained if the biological warfare agents, together with their munitions, were subjected to large scale field tests. . . . The committee feels that such facilities must be provided without delay, and that large scale field tests on the biological warfare agents and munitions should be carried out as soon as possible. [Defendant's Exhibit 121, p.16.]

Based on the results of the Pentagon tests and the naval sea trials off Norfolk, the scientists at Camp Detrick were aware of the vulnerability of ships and individual buildings to a covert attack with biological weapons. However, a large scale test to determine the vulnerability of a large population center had never been conducted. The fear was than even a small fishing vessel or submarine, manned by agents of a hostile power, could move off the coast releasing pathogenic bacteria which would be undetectable during an incubation period of days to weeks, and observable only when both the civilian and military population exhibited symptoms.

According to the testimony of Dr. Phillips, the San Francisco test proposal began at Camp Detrick with civilian

scientists in the Physical Defense Division of the Army Chemical Corps laboratory, in conjunction with the Special Operations Division. Dr. Phillips supervised the proposal. The San Francisco area was suggested because the object as to assess the vulnerability of a United States seacoast city to covert naval attack. The San Francisco area was extremely vulnerable to subversive attack, it contained the headquarters of the Sixth Army and a consideration portion of the Pacific Fleet, and offered existing biological laboratories and naval facilities, as well as the civilian and military expertise required to conduct the tests.

The court was particularly concerned with the military's use of a populated area as a test site. The testimony of the experts involved in the tests revealed that an actual city was necessary as a test site because the variety of air currents produced by buildings, traffic, and heat from a variety of sources would affect both the movement of the aerosol downwind from the source and the viability of the organisms. No valid results as to potential damage to populated regions could have been obtained had the test been run in an isolated area.

The stated objectives of the test were: (1) to study the offensive possibilities of attacking a seaport city with a biological warfare aerosol generated from a ship or other source located offshore; (2) to attempt to measure the magnitude of the defensive problem presented by the attack; and (3) to gain additional data on the behavior of a biological warfare aerosol as it was borne downwind. [Defendant's Exhibit 20, p.1.]

The proposal passed through Charles Phillips, detailing the means, times. concentrations, and methods of monitor-

ing, and was submitted to Dr. Woolpert who in turn gave the proposal to Colonel Creasy. He passed it to the Chief Chemical Officer for approval.

General McAuliffe, the Chief Chemical Officer, received a positive recommendation from the advisory committees for the San Francisco test. General McAuliffe could have withheld his approval for the test for any reason, including the technical advice he was given or simply on his own judgment as to the inadvisability of conducting the test. An illustration of that authority occurred when he refused to allow a test to be conducted in the New York City subway system. The test had been proposed in a manner similar to that in the San Francisco test. General McAuliffe authorized the San Francisco test by Secret letter, CMLWR001 BW, dated July 13, 1950. Because of the necessity of assistance from the United States Navy, Admiral Forrest Sherman, Chief of Naval Operations, authorized the participation by the United States Navy in the test by Secret letter serial 00391P34, dated July 27, 1950 [Defendant's Exhibit 20, p.1.] The Navy did, in fact, allow the scientists from Camp Detrick to use a Navy minesweeper, and the tests were conducted as planned.

C. Conclusion

There was a significant fear of the possibility of biological warfare attack on the United States during World War II and the years immediately thereafter. For that reason, the OSD and its predecessors set up highly qualified advisory committees on the subject and delegated authority over the conduct of the operations down through the Department of the Army to the Chief Chemical Officer, General McAuliffe. It was at the level of the OSD that the

discretionary decision was made, balancing a number of factors, to conduct large scale field tests which would explore the vulnerability of the United States to biological warfare attack. It was at the level of the Chief Chemical Officer, McAuliffe, that the discretionary decision was made to conduct a test over San Francisco using biological warfare simulants. Many factors were weighed there, too, including the possibility of panic, a need for secrecy and possible risks. McAuliffe could, and on at least one occasion did, decide that risks outweighed the benefits and veto a proposed test. Both the discretionary decisions of the OSD and the Chief Chemical Officer were made with the advice of the Baldwin Committee and the OSD's Research and Development Board, amongst others, but those committees had no authority to permit a test to go forward or to veto a test proposal.

For the foregoing reasons, the court concludes that the decisions to perform the acts of which plaintiffs complain were made at a discretionary level, and therefore the government is immune from liability for the results of those actions.

The court will further consider plaintiffs' contentions as to whether the government violated its own directives in the conduct of its tests. The directive of the operation was to use "innocuous organisms." Therefore further issues will be whether or not *Serratia marcescens,* strain 8UK, was an "innocuous organism" and whether there was negligence in the use of *Serratia marcescens,* strain 8UK.

III. NEGLIGENCE: WAS THE GOVERNMENT NEGLIGENT IN ITS USE OF *SERRATIA MARCESCENS*, STRAIN 8UK, IN THE SAN FRANCISCO FIELD TESTS?

Whether or not the "directive" was followed and/or whether the Federal Tort Claims Act applies (as plaintiffs contend), the issue re negligence is the same, because the question is the same in both cases: was the government negligent in the selection and use of *Serratia marcescens*, strain 8UK?

In determining whether the government was negligent, i.e., whether it took an unreasonable risk, the court must inquire into the state of microbiology in 1950 and specifically into the medical and scientific communities' awareness of any inherent risk in the use of that organism. The court finds, after considering the available literature on *Serratia marcescens* in 1950 and after extensive testimony by very able scientific experts, that the government was not negligent in the use of *Serratia marcescens*, strain 8UK, in the San Francisco tests. In accordance with the foregoing conclusion of law the court makes the following findings of fact.

From the testimony of Dr. Woolpert, it appears that the scientists at Camp Detrick received strain 8UK from the British sometime during World War II. The reason that a single strain of the organism was standardized between the Allied forces was that the uniformity would allow comparison between results of experiments conducted under widely divergent circumstances. That particular strain, 8UK, was chosen because of certain characteristics including an unfailing production of a readily identifiable red

pigment upon incubation, demonstrated stability over time, and safety to personnel. The British had extensively used *Serratia marcescens,* strain 8UK, in their own field trials with no resulting illness.

The foregoing characteristics, identifiability and safety, and a close approximation of the characteristics of known pathogens, were the considerations for the choice of simulants in the San Francisco field tests in 1950. Two types of bacteria were chosen and used: *Bacillus globigii* and *Serratia marcescens.* Exceptionally learned and able scientists testified at length concerning the simulants used and most especially about *Serratia marcescens,* since that is the bacteria that is alleged to have caused the death of Edward Nevin.

Bacillus globigii is a common soil bacterium, ubiquitous in nature, and readily cultured from hay, dust, milk, and water. Because it forms spores, is highly resistant, and because of its longevity, in testing it approximates the pathogenic anthrax. Further, it produces a readily identifiable orange pigment upon incubation. It was considered harmless to man and, with *Serratia marcescens,* was among the most commonly used biological warfare simulants.

Serratia marcescens is a gram-negative vegetative organism common in water, food, sewage, and soil. It is a member of the division klebsiella-enterobacter-serratia, within the family enterobacteriaceae. In terms of longevity, it is quite different from *Bacillus globigii* because it does not form spores and dies relatively quickly in open air. These characteristics approximate those of many known pathogens, making *Serratia marcescens* another good biological warfare testing agent. [Defendant's Exhibit 29.] Accord-

ing to the experts, *Serratia marcescens* had been widely and extensively used as a biological marker in the scientific and medical communities prior to 1950 and was considered safe by all those who used it. [Defendant's Exhibits 50, 51.] It is important to note that there are some 10,000 strains of *Serratia marcescens*, of which 8UK is but *one*. Each strain has its own characteristics. In 1950 very little was known of *Serratia marcescens* and of its numerous strains, and that fact must be kept in mind when considering pre-1950 literature regarding *Serratia marcescens*.

A. Literature prior to 1950

In 1906, M. H. Gordon was commissioned to study the atmospheric hygiene of the House of Commons after an influenza epidemic. He gargled a liquid culture of *Serratia marcescens* and recited passages from Shakespeare to an audience of agar plates in the empty hall. Recovered colonies of red-pigmented *Serratia* demonstrated that speech, as well as coughing and sneezing, could disseminate bacteria throughout a room. Gordon apparently suffered no ill effects from the experiment, despite having introduced the bacteria in large quantities into his respiratory system. [Defendant's Exhibit 50, p. 2.]

In 1920, J. G. Cumming sprayed the throats, mouths and lips of American soldiers with a suspension of *Serratia* in order to determine whether respiratory tract infections could be transmitted by hand in a controlled setting. He subsequently isolated the organism from the hands, mess kit utensils, and oral cavities of other soldiers. No illness was reported to have resulted to Cumming or to his volunteers from the experiment. [Defendant's Exhibit 50, p. 3.]

In 1937, L. W. Burket and C. J. Burns, and in 1949, M. G. McEntegart and J. S. Porterfield, conducted experiments which led to a knowledge of bacteremia following dental extraction. *Serratia* was painted on the gum of the neck of the tooth to be extracted, and a blood culture was later taken. *Serratia* was isolated from the blood of a number of the patients. Apparently, none suffered ill effects from the procedure. [Defendant's Exhibit 50, p. 3.]

It is true that, prior to 1950, there were reports of disease in animals from *Serratia marcescens* and other chromobacteria. [Plaintiff's Exhibits 23-25, and 30.] However, Dr. Wheat, who wrote an article reciting the studies in question [defendent's Exhibit 52], and who treated Edward Nevin, indicated in his testimony that animal studies are of dubious value in predicting potential pathogenicity in man, especially where an organism is injected in large quantities directly into the body cavity of an animal. Other experts concurred in that opinion. The court therefore finds that the animal studies did not put the United States on notice of the dangers of *Serratia marcescens.*

Plaintiffs have also brought attention to three pre-1950 articles which involve *Serratia marcescens* in conjunction with human illness. [Plaintiffs Exhibits 27-29.] In none of those cases is there any indication that *Serratia marcescens* caused any injury to a human being. A 1913 article by H. M. Woodward and K. B. Clarke reported discovery of what may have been *Serratia marcescens* in the sputum of a patient with a chronic cough. There was no indication of damage to the patient, and no contention that *Serratia* was the cause of the cough. Articles in 1943 by J. Aaranson and I. Alderman, and by J. L. Thompson, reported a case where

a lumbar puncture resulted in the colonization of *Serratia marcescens* in the normally sterile spinal fluid. [Plaintiffs' Exhibits 28, 29.] The illness cleared up without apparent damage to the patient, who had been suffering for four years with syphilis.

Perhaps the most interesting documentation of exposure of *Serratia marcescens* to man came out of Camp Detrick itself. In a 1946 article, Dr. Thomas Paine described how four individuals including Dr. Gail H. Dack, the Camp Safety Director, were exposed for two-and-a-half hours to an aerosol of *Serratia marcescens* at a concentration of two million (2,000,000) viable organisms per cubic foot of air. [Defendant's Exhibit 51.] After two-and-a-half to four hours the individuals began to cough, had a smarting sensation in the eyes, slight tearing, general malaise, chilliness, and generalized ache. A fever developed which persisted for six to eleven hours. The subjects' temperature then returned to normal with subjective improvement in the complaints listed.

In an infectious process, bacteria gain entrance, incubate for an individualized time, and begin to grow. This growth results in spread of the bacteria to tissues where their growth produces clinical symptoms, either because they produce a toxin (toxicity), or simply disrupt normal processes by sheer numbers (invasineness). Since the symptoms in the Paine test lasted only six to eleven hours there could not have been an infection, because had the bacteria multiplied sufficiently to cause symptoms they would have continued to multiply and the symptoms would have worsened rather than stopping as they did without treatment. Dr. Paine indicated that two-and-a-half to four hours

is not enough time to gain entrance, incubate, multiply, spread, and re-multiply to produce symptoms. Dr. Paine's article postulates that the symptoms were caused by a pyrogen reaction, with the body reacting to the admission of huge quantities of a foreign substance. This conclusion is consistent with the fact that when the numbers of organisms and the exposure were reduced, no ill effects remained. The article was evidence to the scientists at Camp Detrick that *Serratia marcescens* would not produce an infection in man, even with massive dosage and exposure, and that even if sheer quantity caused a reaction (and the quantity in the Paine test was immensely larger than any quantity to which the residents of San Francisco may have been exposed), the reaction was not severe.

The court finds from a review of the medical literature prior to 1950 that the government had no reason to suspect *Serratia marcescens* of being pathogenic to man, or that the population of San Francisco would be endangered by the test. On that basis, the government was not negligent as a matter of law.

It is interesting to note that *Serratia marcescens* was used long past 1950 as a biological marker by reputable members of the medical and scientific communities. Dr. Wheat's article, concerning the chromobacteria outbreak in San Francisco, was published in 1952 and described chromobacteria as having "been considered essentially nonpathogenic in man." [Defendant's Exhibit 52.] In 1957, Dr. E. H. Kass, a distinguished physician specializing in infectious disease and an expert on the subject of *Serratia marcescens,* used that bacteria in experiments regarding urinary tract infection. Dr. Kass applied *Serratia marces-*

cens to the external genitalia of catheterized stroke patients and found that the bacteria travelled to the bladders of the patients. [Defendant's Exhibit 59.] None of the patients became ill. Dr. Kass' choice of *Serratia marcescens* was based on his extensive personal experience with the organism and the belief that it was safe to use on what appeared to have been extremely debilitated patients.

Plaintiffs argue that even if *Serratia marcescens* was not recognized as potentially harmful to healthy test volunteers, it was negligent to expose a diverse population to the organism since some people, such as Mr. Nevin, could be expected to be exceptionally vulnerable. Dr. Kass' experiments with patients in that condition in 1957 reveals exactly how safe *Serratia marcescens* was considered to have been, even after the Wheat article of 1952 describing Nevin's death.

Bacteria may be pathogenic or non-pathogenic, and they may also be classed as "opportunists"—organisms which are not normally pathogenic but which may, under certain circumstances, cause disease. Opportunists are only dangerous to members of the population who have been deprived of the usual bodily defenses to microbial infection: for example, through surgery.

It is the plaintiffs' contention that *Serratia marcescens* is an opportunistic organism and that therefore it is dangerous to man, and that the use of it over a large and diverse population is dangerous because it can be anticipated that some members of the population will be in a weakened state and therefore vulnerable to the opportunistic organism. Plaintiffs are correct that *Serratia*

marcescens is an opportunist, but that fact was not known to the scientific and medical community until well after the 1950 field tests on San Francisco. As of the time of those trials, the consensus among the experts was that the organism was non-pathogenic and therefore quite safe to use, even if that involved exposure to a diverse population. The testimony of Dr. Schaberg and other renowned scientists is quite clear on that point. Any present day apprehension with reference to the use of *Serratia marcescens,* as an "opportunist" or otherwise, cannot be related back to 1950 so as to infer knowledge of, or notice to, the United States as to danger in its use of the organism.

Into the 1970's, *Serratia marcescens* was sprayed in hospitals to study bacterial drift and was used without precautions by microbiology students in routine laboratory exercises [Defendant's Exhibit 50.] On the testimony of eminent scientists, such as Drs. Farmer and Kass, this court finds the use of *Serratia marcescens* as a biological marker and scientific aid not to have been negligent in 1950, and for at least several years thereafter.

B. Belief of Experts in 1950 in the Safety of *Serratia Marcescens,* Strain 8UK

The overwhelming evidence at trial was that experts in the fields of medicine and microbiology in 1950 were convinced of the safety of *Serratia marcescens* as a biological marker. The organism was used in vast quantities at Camp Detrick and personnel were regularly exposed to it. There were no reports of adverse effects from such exposure except as described in the Paine article, discussed earlier. Responsible scientists have testified that they would not

have used the organism if they had had any question as to its safety. At least one expert testified that he would use strain 8UK in a field test in 1981, being quite convinced of its safety.

Supporting the foregoing testimony is the fact that personnel at all levels at Camp Detrick continually exposed themselves to *Serratia marcescens,* 8UK, without taking any precautions. Further, the technical director of Camp Detrick, Dr. Woolpert, reviewed the literature on, and conducted tests of, *Serratia marcescens,* 8UK, in 1946. That review did not cause him to take any precautions regarding exposure of camp personnel, including himself, to *Serratia marcescens.* As noted earlier, the safety director of Camp Detrick, Dr. Dack, voluntarily exposed himself to immense quantities of 8UK in the Paine test. In contrast, Dr. Dack required quite elaborate precautions taken with known pathogens.

The San Francisco experiment was not the first field test conducted by the government using *Serratia marcescens,* strain 8UK. In April of 1950, the same two stimulants used in the San Francisco test, *Bacillus globigii* and *Serratia marcescens,* were used in a test of the vulnerability of United States naval vessels at Norfolk, Virginia, to biological warfare attack. The officers and crew of two vessels, the USS Coral Sea and the USS K. D. Bailey, were exposed to the bacteria in seventeen different trials. The bacterial clouds used in those tests were generated by the same aerosol method as that used at San Francisco, and there were no reports of ill effects on Navy personnel. [Defendant's Exhibits 29, p.125, and 13, p.2.]

Serratia marcescens was also used to test the vulnerability of the Pentagon to covert biological warfare attack in 1949 and 1950. Three tests exposed the nation's highest military leaders to *Serratia marcescens*; no illness was reported. These tests, which exposed thousands of people to *Serratia marcescens* are further evidence of the fact that it was considered an absolutely safe biological marker in 1950. The Pentagon and Norfolk tests are also a strong indication of the military's good faith in conducting the San Francisco test; they had tested the same organisms on themselves first.

IV. PROXIMATE CAUSE: DID THE TESTS CONDUCTED BY THE GOVERNMENT CAUSE THE DEATH OF EDWARD NEVIN?

Assuming, *arguendo*, that the government is not immune and that the conduct of the test was negligent, the next question the court will consider is whether the bacteria released by the government in San Francisco tests actually caused the death of Edward Nevin. The court finds that Edward Nevin's death was not caused by 8UK, the strain of *Serratia marcescens* released by the government, and that Mr. Nevin died as a result of chromobacterial infection which had invaded his body before the government's San Francisco test. It follows that, as a matter of law, the acts of the government were not the proximate (legal) cause of his death. In accordance with the foregoing finding and conclusion, the court makes the following findings of fact.

A. The *Serratia Marcescens* Aerosol Reached Stanford Hospital

After General McAuliffe approved the San Francisco field tests, the scientists at Camp Detrick prepared solutions of *Bacillus globigii* and *Serratia marcescens* for use during the test. Strain 8UK was the only strain of *Serratia marcescens* used by Camp Detrick personnel as a simulant during the time period under consideration. As related earlier, the standardization of one strain of *Serratia* marcescens was instituted in order to assure uniformity of results in different tests.

A number of scientists travelled from Camp Detrick to San Francisco to conduct the tests, which were carried out as planned, and a report, "Special Report No. 142," was written describing the results of the tests. [Defendant's Exhibit 20.]

A total of six trials were made. The biological markers which had been prepared at Camp Detrick were tested and loaded on board a minesweeper, the USS ACM 13. The ACM 13 steamed a north-south course during those trials off the western shore of the City of San Francisco in the Pacific Ocean. Careful records were made of the meteorological conditions at the time, and forty-three sampling stations in San Francisco and the East Bay were prepared to record the presence and quantity of the simulant which arrived at each location.

The two trials which utilized *Serratia marcescens* were made on September 26 and September 27, 1950. In the first of these, on September 26, 1950, at 4:15 p.m. the ACM 13 steamed a course two miles long and about ten miles off

the western shore of the city. The ship released an aerosol of *Serratia marcescens* in a concentration of 6.0×10^9 organisms per cubic centimeter for twenty-nine minutes. The sampling stations operated for three hours. The weather was clear, the temperature was at 68° Fahrenheit, and an inversion was present.

On September 27, 1950, the ACM 13 released *Serratia marcescens* in a concentration of 1.45×10^{10} organisms per cubic centimeter along a southerly course of two miles, two miles off shore. The ship began generation of the aerosol at approximately 5:00 p.m. and concluded at 5:30 p.m. Sampling stations operated for two hours. Weather conditions were similar to those in the previous day's test.

In each of the tests approximately 130 gallons of the suspension was sprayed. However, the aerosol generators operated at approximately 5% efficiency, so that only 1/20th of the number of organisms sprayed into the air actually remained in the air; the other 95% fell into the water where it was quickly destroyed, because *Serratia marcescens* is unable to survive in a salt water environment.

In neither of the two tests described above did any of the collecting stations collect and positively identify *Serratia marcescens.* After the prescribed incubation period none of the 675 collecting plates used during the tests showed the characteristic red pigment of *Serratia marcescens.* After an additional incubation period, some red pigmentation did occur, but the Army's report on the test at the time, Special Report No. 142, indicated that the climatic conditions of temperature and relative humidity

were not conducive to the survival of vegetative organisms. The scientists felt that the *Serratia* had died before reaching any of the collecting plates in San Francisco.

The plaintiffs presented extensive evidence concerning the meteorological conditions which may have been in effect at the time the tests were run in 1950, in order to establish route of travel of the bacterial cloud. However, the court makes no findings as to the specific meteorological conditions at the time of the test because such findings would be quite speculative. And in light of the court's previously stated finding of fact that whatever quantity of *Serratia marcescens* did reach the City of San Francisco was already dead, the question of the exact route of travel of the dead bacteria is immaterial to the case. On the basis of Special Report No. 142, the court finds that at least some of the bacteria did reach the Stanford Hospital where Edward Nevin was staying, because even dead or inert particles would travel with the prevailing winds once released in an aerosol form.

B. The Serratia Marcescens, Strain 8UK, Was Dead When It Reached the City of San Francisco

In addition to the inconclusive results obtained from the sampling stations during the San Francisco test and reported in Special Report No. 142, additional testimony by the scientific experts at trial compels the conclusion that the *Serratia marcescens* died before it reached the City of San Francisco. Vegetative organisms cannot survive long in an open air environment. Once deprived of the protection of a liquid medium, the bacteria are affected by the large quantities of oxygen in the atmosphere and soon die.

Vegetative organisms, such as *Serratia marcescens,* are also extremely sensitive to ultraviolet light and to the saline content of the air over the ocean. Convincing scientific evidence indicates that the outer range of the survivability of *Serratia marcescens* under conditions such as those in effect at the time of the test would be two miles; and the nearest the ACM 13 came to San Francisco during the spraying was two miles.

The fact that red pigment did appear after an extended incubation period is explained by the fact that *Serratia marcescens* and other organisms which create red pigment exist in nature and the sampling stations collected some of those as well as the dead bacteria sprayed by the government. *Serratia marcescens,* strain 8UK, is very stable and predictable and, had any of it been viable, it would have pigmented within the usual sixteen to twenty-four hours. The time required for the bacteria in Test F, on September 27, 1950, to create pigment (four days), is convincing evidence, on the testimony of Drs. Farmer and Woolpert, that the bacteria was not strain 8UK, as that delay is not characteristic of that strain.

C. Strain 8UK of Serratia Marcescens Did Not Cause Edward Nevin's Death

The course of Edward Nevin's fatal illness was recorded in an article published by Dr. Richard Wheat in October of 1951, which described a series of eleven cases in which chromobacteria, "probably *Serratia marcescens,*" were isolated from patients at Stanford Hospital. The history of Edward Nevin's disease compels the conclusion that he did not die from infection by *Serratia marcescens,* strain

8UK, but of an infection which had invaded his body well before the government's tests were conducted.

Dr. Wheat described Mr. Nevin as a 67 year old man (he was actually 75 years old) suffering from arteriosclerotic heart disease, with mild failure, and moderately advance prostative hypertrophy. In mid-August of 1950, about six weeks before the San Francisco field tests occurred, Mr. Nevin was catheterized for acute urinary retention. He developed a fever and sulfonamides and aureomycin were administered, but no urinary culture was taken to determine the causal organism. The fever subsided, and one month later a retropublic prostatectomy was performed, which was followed by a brief period of hypotension and oliguria.

In light of the conflicting testimony on the subject, it is impossible to determine the exact dates that Mr. Nevin was hospitalized during the four months preceding his death. However, the court finds that the prostatectomy occurred on September 10 or before, and approximately three weeks prior to the spraying of the *Serratia marcescens* by the United States. The most likely date, supported by Dr. Wheat's medical records, is September 7th.

Mr. Nevin's post-operative condition was not unusual and he left the hospital for approximately one week in late September. He was not catheterized while he was at home during this period. On October 1, 1950, Mr. Nevin developed a fever and returned to the hospital. On October 2, gram-negative chromogenic bacteria were isolated from his urine. Penicillin, aureomycin, and sulfonamides were administered, the fever subsided, and he was again released.

His fever returned within a few days and Mr. Nevin entered the hospital again complaining of chills, fever, and malaise. He was treated with an extensive course of antibiotics, but his condition deteriorated and he died on November 1, 1950. The clinical diagnosis was chromobacteria urinary tract infection with septicemia. Mr. Nevin's previous arteriosclerotic heart disease had been complicated by the bacterial endocarditis which developed on his tricuspid valve during his final illness, and chromobacteria were isolated from his heart blood. In sum, Edward Nevin died of a bacterial infection in his bloodstream which had colonized in his heart.

The outbreak of chromobacteria which killed Edward Nevin was virulent. Expert testimony indicates that this virulent strain of the bacteria developed over a period of years in a hospital environment and became quite resistant to antibiotics. Both the process of acquiring virulence and acquiring resistance to antibiotics requires an extended period of time—a much greater period of time than that between the San Francisco field tests and the infection in Edward Nevin.

In order to determine whether the bacterial outbreak described in Dr. Wheat's 1952 article ("the Stanford strain") involved infection due to *Serratia marcescens*, strain 8UK, Dr. John F. Farmer, an expert in *Serratia* and a highly regarded microbiologist from the Center for Disease Control in Atlanta, conducted a number of tests. Dr. Farmer obtained a sample of 8UK from the Army, which had preserved the bacteria in a "freeze-drying" process, and cultured a large amount of it for test pur-

poses. Using this, *the same strain that the Army had used,* he tested certain characteristics of the strain and compared them with the characteristics of the Stanford strain, which Dr. Wheat had carefully described in his article.

From Dr. Wheat's observations the Stanford organism grew in the presence of 250 micrograms of terramycin and 50 micrograms of chloramphenicol. Strain 8UK did not grow in the presence of those amounts of those antibiotics. Also, when the Stanford strain was injected intraperitoneally into mice all the mice died, even when the solution was diluted to 1:10, 1:100 and 1:000. By contrast, 8UK injected in the same manner killed all of the mice at full strength, 80% of them at 1:10, and none of the mice at 1:100 or 1:1000.

The foregoing is convincing evidence that the Stanford strain was a quite virulent one which had acquired a certain immunity to antibiotics over time; 8UK is not a virulent strain and is not so resistant to antibiotics. Other tests by Dr. Farmer involving the organism's characteristics during fermentation reinforce the conclusion that *Serratia marcescens* strain 8UK. was not the strain that infected Edward Nevin.

The court finds that the outbreak which killed Edward Nevin was a urinary tract, cross-infection outbreak. It is unlikely, in light of Dr. Wheat's investigation and the expert testimony supporting it, that the outbreak came from a "common source" which infected all of the eleven patients described in Dr. Wheat's article. Rather, the court finds that this was a cross-infection, spread from patient to patient which was transmitted into Edward Nevin's body

through the medium of catheterization. The other patients described in Dr. Wheat's article also became infected through manipulation of the urinary tract. *Serratia* can gain access to the human gastrointestinal tract through inhalation, but the course of Edward Nevin's illness indicates, and the court finds, that the method of entry in Edward Nevin's case was into his urinary tract by means of the catheter.

Given the time frame, the court finds that Edward Nevin had already acquired a chromobacterial infection, the infection which eventually killed him, prior to the September 26 and September 27 tests conducted by the Army. The testimony of Drs. Kass and Schaberg is quite convincing on this point. The infection was acquired when the catheter was in place immediately following Edward Nevin's surgery and while his body was extremely vulnerable to infection due to both the breach of defense mechanisms following surgery and his generally debilitated condition. The catheterization allowed a great deal of the infection to drain off with the urine, but when the catheter was removed the bacteria began to grow in Edward Nevin's vulnerable body, and eventually spread to his heart. Further support for the court's finding that Edward Nevin did not acquire the *Serratia* infection from the government's testing is the lack of any indication that he was catheterized during or following the Army's test and catheterization is certainly the method by which the Serratia entered his body.

The bacteria that caused the death of Edward Nevin was an "in hospital" strain (as opposed to the 8UK strain used by the Army) and it was "in hospital" for months prior to

the outbreak. It is common in hospital outbreaks that a "build up" period of growth and resistance can last for a period of months. Then the outbreak appears and eventually stops, without apparent reason. That is what occurred in this case; the 8UK strain used by the United States did not cause the Stanford Hospital outbreak. Further, there has been no evidence to establish that strain 8UK of *Serratia marcescens* has ever been associated with human disease, then (1950) or now (1981).

It is possible that *a* strain of *Serratia marcescens* caused the death of Edward Nevin, but the totality of the evidence concerning *Serratia marcescens,* strain 8UK, compels the conclusion that *that* strain was not the one which infected Edward Nevin. *Serratia marcescens,* although now known to have pathogenic possibilities, is still certainly on the low end of the scale of pathogens. Its disease-producing potential is only serious when competing organisms have been eliminated by antibiotic treatment and normal host defenses have been lowered by, for example, age, disease, or surgical procedures. All were present in Edward Nevin's case. With respect to virulence, the ability not only to invade but also to cause symptoms, strain 8UK (one of over 10,000 strains) is on the low end of the scale of *Serratia marcescens,* in that there is no documented case of it having been found to cause symptoms in man. Dr. Kass, one of the foremost experts on the subject, is not aware of any of the stable marker strains of *Serratia marcescens* having caused disease in man.

The only known instance of colonization, presence of the organism in the human host without symptoms, by strain 8UK occurred in 1957 in Wisconsin where researchers were

spraying 8UK in a hospital near a nursery for new-born children. A new-born baby with no host defenses and no competing bacteria was colonized by 8UK, although the child suffered no harm from the experience. The only reason that the colonization of the 8UK was discovered was because her diapers revealed the characteristic red pigmentation of strain 8UK after incubation.

Finally, strain 8UK does not possess the resistance to antibiotics demonstrated by the strain which infected Edward Nevin. This is further convincing evidence to the court that the strain which infected Edward Nevin was not 8UK but a strain which had been in a hospital environment over a long period and which had developed resistance to antibiotics.

V. DOES THE BURDEN OF PROOF SHIFT IN A CASE OF THIS NATURE?

Before trial, plaintiffs moved the court to shift the burden of proof in the case so as to require that the government prove by a preponderance of the evidence that it did not cause the death of Edward Nevin, if the government was found to have acted unreasonably in conducting the tests. The motion was denied subject to reconsideration in light of the evidence presented at trial.

As a preliminary matter, both parties have agreed that the doctrine of *res ipsa loquitur* is inapplicable to the instant case. The plaintiffs, however, seek to invoke a line of cases in which the California Supreme Court shifted the burden of proof to the defendants to establish either (1) factual causation, or (2) the identity of the tortfeasor.

In the well-known cases of *Summers v. Tice,* 33 Cal. 2d 80 (1948), *Ybarra v. Spangard,* 25 Cal. 2d 846 (1944), and *Sindell v. Abbott Laboratories,* 26 Cal. 3d 588 (1980), the court shifted the burden to groups of defendants, so that each defendant was required to establish, if he could, that he was not the tortfeasor. The rationale for the shift was that it would be unjust for an innocent plaintiff to have to bear the difficult, if not impossible, burden of proving which negligent defendant actually caused the injury.

Those cases are inapposite to the instant case since here the issue of negligence, which has been resolved adversely to the plaintiffs, is solely a question of the negligence of the United States and no other party. The thrust of the cases relied upon by the plaintiffs is that in certain situations the plaintiff should not have to prove which defendant committed the wrong; here the question was one of "factual causation"—whether the injury was in fact the result of the actions of the United States.

As plaintiffs observe, the authority which most strongly supports their position is the case of *Haft v. Lone Palm Hotel,* 3 Cal. 3d 756 (1970). In that case, the defendant was negligent as a matter of law for failing to comply with statutes that required a lifeguard or a warning sign at the defendant's swimming pool. As a result of defendant's conduct, there was a paucity of evidence as to the circumstances of the drownings of the two decedents. The court shifted the burden of proof as to the *factual* causation, as opposed to the identity of the tortfeasor, to the defendant. The key point in *Haft* which makes its reasoning inapplicable to the instant case is that the defendants in *Haft* were clearly negligent (negligent as a matter of law), while

the case at bar involves no such obvious negligence. Absent a strong showing of a connection between the acts of the defendant and the injury to plaintiffs' decedent, the court does not feel that this is a case in which justice requires that the burden of proof be shifted.

Plaintiffs argue forcefully, citing the cases discussed above, that on a broader policy level justice requires that plaintiffs not be made to shoulder the difficult burden of proof in this case. While not unmindful of the evidentiary difficulties in a case such as this, again there has been an insufficient demonstration of a nexus between the defendant's acts and the plaintiffs' injury. This ruling comports with the reasoning of the court in *Haft,* that the burden of proof will be shifted only "when there is a *substantial probability* that a defendant's negligence was a cause of the accident." [Emphasis added.] There has been no such showing of a substantial probability in the instant case. Therefore the burden of proof in this case remains with the plaintiffs.

The findings of fact throughout this opinion have been arrived at using the "preponderance of the evidence" standard with the burden of proof on the plaintiffs. If, however, the burden of proof had been shifted as the plaintiffs requested, the court finds, for the reasons previously set forth, that the government proved by a preponderance of the evidence that it was not negligent in conducting the San Francisco tests and that the tests were not the actual or proximate cause of the death of Edward Nevin.

VI. CONCLUSIONS OF LAW

For the reasons set forth above, the court makes the following conclusions of law:

1. The United States is immune from suit in this case under the Federal Tort Claims Act, 28 U.S.C. § 2671, *et seq.*, because the challenged decisions fall within the discretionary function exception of that Act: 28 U.S.C. § 2680(a).

2. The court specifically finds that both the nature of the position held by General McAuliffe as the officer charged with quantitative assessment of United States vulnerability to covert biological warfare attack, and the nature of the decision in the choice of which simulants would best assess such vulnerability, indicate that the judgment was made at a discretionary level, and hence not intended to be the subject of suit.

3. Defendant, by and through its agents and employees, did exercise ordinary care in the choice of simulants.

4. Any injury to plaintiffs was not the proximate or direct result of the release of *Serratia marcescens,* strain 8UK, by the United States, its agents or employees.

5. The burden of proof in this type of case does not shift to the defendant.

Accordingly, the court directs that judgment be entered in favor of defendant.

Dated: May 20, 1981

SAMUEL CONTI
United States District Judge